ing this time 86 species of birds were noted or taken." The writer's work was evidently thorough and searching, and the paper bears intrinsic marks of trustworthiness. We find nothing to criticise, but on the contrary would call attention to several interesting items, notably those relating to the abundance and breeding of *Seiurus Ludovicianus* in this locality, and the occurrence of *Dendrœca Dominica* so far north. The author's views appear progressive, as witnessed in *Parus atricapillus* var. *Carolinensis*.—E. C.

BOTANY.

Supposed American Origin of Rubus Idæus.—Our cultivated raspberry is an importation from Europe. Our native red raspberry, *R. strigosus*, however, is so near it that the specific distinctness has been in doubt; and specimens from British America and the Rocky Mountains certainly occur which a botanist must needs refer to *R. Idœus* itself. In his studies of the European *Rubi*, Prof. Areschoug (in Botaniska Notiser, 1872, and in a translation by himself in Trimen's Journal of Botany, April, 1873, p. 108, etc.) makes prominent and important the fact that *R. Idœus* has no near relative, or in other words is the sole raspberry in Europe, but in mode of growth, in the bark, etc., as well as in the fruit, accords with American species,—with one of them so closely that all who have come to the conclusion that species have a history must needs infer a community of origin. Areschoug concludes, accordingly, that "this species did not originally have its home in Europe, but its origin is to be found in the east of Asia, viz.: Japan and the adjacent countries, or perhaps in North America." It is one of the members of that old boreal flora (as we suppose) now mainly East Asiatic and North American, which has found its way to, or held its place in, the north of Europe somewhat exceptionally. Both *R. strigosus* and *R. Idœus* inhabit Japan and Mandchuria, and Maximowicz regards them as forms of a common species. Prof. Areschoug adopts the now familiar idea "that the Asiatic and North American floras have reciprocally mixed with each other by passing Behring's Straits and the islands which in its neighborhood form a bridge between the two continents;"—which is a partial explanation of a problem that has to be treated far more generally now that we have reason to believe that this flora formerly filled the Arctic zone. He thinks, more-

over, that the simple-leaved frutescent species (also extra-European) are the ancestors of those with divided leaves,— but this is a speculation of a different character, upon which little or no evidence can be brought to bear.—A. GRAY *in American Journal of Science.*

BOTANICAL NOTELETS.— *Equisetum arvense* is characterized as having, and generally has, its branches 4-sided and the teeth four. Milde describes a variety *boreale*, chiefly high northern, with three teeth and 3-sided branchlets. This form is very common around Boston, chiefly in grassy places, and it might in the absence of the fertile plant be mistaken for *E. pratense.* It has been noticed here for some time, but attention has been called to it by Mr. Wm. Boott.

Cypripedium acaule with two flowers has been sent by Mr. J. S. Scott, of Westfield, Mass. The flowers are approximated, the second bract close to and opposite the usual one; and the lips of the two of course facing each other.

Acer nigrum with stipules, at Wabash, Indiana, which Mr. Mills brought to our notice last year, holds the character this season, not only in the tree first observed but in several others.

Anemone nemorosa, or *trifolia.* From the Peaks of Otter, at altitude of about three thousand feet, Mr. A. H. Curtiss sends an anemone of a form new to this country (although there is some approach to it in Oregon), which may be called *A. nemorosa* with undivided leaflets or *A. trifolia* L., according to the botanists' fancy. It is fully as large as the latter, having the stem a foot high up to the leaves, and the leaflets two and one-half inches long; the deepness of the teeth of these, and a slight tendency to trilobation, should rather refer it to *A. nemorosa*, which not rarely exhibits this state in Europe. This European form, as Mr. Curtiss remarks, appears to have kept company with *Convallaria majalis*, being here associated with it in one of the most northern stations of this plant, which in America is restricted to the Alleghanies.

Dimorphism in Forsythia. In Cambridge and its vicinity all the blossoms of *Forsythia suspensa* have long filaments and a short style; all those of *F. viridissima* have short filaments and a long style. This was noticed by Mr. Brown, one of my pupils, of the present Senior Class. In all probability this is not a specific difference, but one of dimorphism. That only a single form of each

species should be met with in this neighborhood, or even in the country, is not extraordinary, since these shrubs are propagated from cuttings or slips. The published figures of *F. viridissima* are of the long-stamened sort. Siebold and Zuccarini describe the long-styled form of *F. suspensa*, the counterpart of the one we have, but their plate represents both; so that the fact of dimorphism is pretty well made out.—A. GRAY.

ZOOLOGY.

THE DIMINUTION OF FOOD FISHES.—In our recent abstract of the annual report of the Commissioners of Fisheries of this State, reference was made to a letter addressed to the Commissioners by Prof. Baird of the Smithsonian Institution and United States Commissioner of Fish and Fisheries, in answer to one sent by them asking his opinion as to the probable cause of the rapid diminution of the supply of good fishes on the coast of New England, and especially of Maine. The letter is of such an interesting character that we subjoin it nearly entire: —

"We are all very well aware," writes Prof. Baird, "that fifty or more years ago, the streams and rivers of New England, emptying into the ocean, were crowded and almost blockaded, at certain seasons, by the numbers of shad, salmon and alewives seeking to ascend for the purpose of depositing their spawn, and that, even after these parent fish had returned to the ocean, their progeny swarmed to an almost inconceivable extent in the same localities, and later in the year descended to the sea in immense schools. It was during this period that the deep-sea fisheries of the coast were also of great extent and value. Cod, haddock, halibut, and the line fish generally, occupied the fishing grounds close to the shore, and could be caught from small open boats, ample fares being readily taken within a short distance of the fishermen's abode, without the necessity of resorting to distant seas. Now, however, the state of things is entirely different. The erection of impassable dams upon the waters of the New England States, and especially of the State of Maine, has prevented the upward course of the anadromous fishes referred to, and their numbers have dwindled away, until at present they are almost unknown in many otherwise most favorable localities.

The fact, too, has been observed, that with the decrease of these fish there has been a corresponding diminution in the numbers of the cod and other deep-sea species near our coasts; but it was not until quite recently that the relationships between the two series